

REMARKS

Claims 10-15 have been cancelled and new claims 16-27 have been added, where claims 16-20 represent cancelled claims 10 and 12-15 as amended.

The Examiner has rejected the claims in view of Goebel (20020148276) and Wehde (3259730). In view of the amended claims and following remarks, Applicant respectfully disagrees.

The inventive machine is a lathe, whereas the item to be balanced is a wheel without tyre without valve. The material is removed from a rim because the rim is thick enough to allow the removal of material without prejudicing the structure of the wheel. However, the material is removed from a place that is destined to come into contact with the end shoulder of the tyre. This is notable in particular for a tubeless tyre to avoid air leaks between the rim and tyre. For this reason the geometry of the mass to be removed is selected on order to avoid steps or cavities.

The inventive lathe is provided with a control unit for detecting the unbalance and to correct the unbalance by simulating the presence of a valve. In order words, the wheel without a valve and without the tyre is balanced as the wheel would have been if a valve were provided in it. Therefore, the material is removed from the wheel for balancing a simulated unbalanced and not a real unbalance. That is, the invention provides for preventive balancing.

Turning to Goebel, the reference discloses a method for calibrating unbalance measuring apparatus. Goebel does not disclose a balancing method, but establishes a relationship between an unbalance determined by two masses located on different planes and a single mass located in a further plane. The Examiner asserts that the reference teaches adding masses. While the reference adds mass for the purposes of calibrating a balancing system, the claimed invention teaches calculating simulated masses to be removed from a wheel, which is not taught by the reference. In addition, the calibration parameters of the reference do not call for removing simulated masses.

Wehde, on the other hand, discloses a balancing apparatus for balancing a gyroscope. The balancing apparatus includes means for detecting an unbalance and a laser beam device for removing material from the gyroscope, and correcting the unbalance. The removal is performed in a housing under vacuum by means of a pulsed laser beam.

It is not clear how the teachings of the references could be combined, and even if they could, they would not provide the claimed lathe system. That is, the references, when combined, may teach a system which adds masses to a gyroscope balancing device for calibrating the device. However, the combined references do not teach a balancing system which includes a lathe, first and second simulated masses accounting for a hypothetical valve, and which removes material from the wheel based on such accounting.

Based on the above amendments and remarks, it is respectfully submitted that the claims are patentable.

The Commissioner is hereby authorized to charge any fees associated herewith or credit any overpayment to our Deposit Account No. 50-1145.

Respectfully submitted,
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